INTISARI

GILANG SRI ANDRIYATMOKO, 2017, *Perencanaan Tebal Lapis Ulang (Overlay) Landas Pacu Pada Pengembangan Bandar Udara Korowai Batu Papua Menggunakan Metode Manual FAA dan FAARFIELD Software* (dibimbing oleh Dr. Eng. Iman Haryanto, ST.,MT.).

Korowai Batu merupakan salah satu daerah di Papua yang masih terisolir dan hubungan dengan pihak luar masih terbatas karena kurangnya sarana prasarana transportasi. Pembangunan transportasi udara perlu ditingkatkan guna memecahkan keterisoliran dan menjangkau daerah di pedalaman Papua. Korowai Batu mempunyai sebuah landas pacu dengan ketebalan eksisting 17 cm. Pemeliharaan landas pacu dengan *overlay* perlu dilakukan untuk melayani pesawat yang akan menggunakan landas pacu tersebut. Perencanaan tebal lapis ulang perkerasan landas pacu dapat dianalisis dengan menggunakan metode *FAA* yaitu dengan Manual *FAA* dan *FAARFIELD Software*.
Dari hasil analisis dapat disimpulkan bahwa pada Pembangunan Tahap I (Tahun 2016-2025) dengan pesawat rencana *DHC 6 Twin Otter* dan *N219*, metode Manual *FAA* dihasilkan ketebalan total 33 cm terdiri dari *subbase course* 13 cm, *base course* 10 cm dan *surface course* 10 cm; Metode *FAARFIELD* dihasilkan ketebalan total 20 cm terdiri dari *subbase course* 15 cm, *surface course* 5 cm, dan kebutuhan tebal *overlay* 3 cm. Pembangunan Tahap II (Tahun 2026-2035) dengan pesawat rencana *CN235* dan *ATR42-500*, metode Manual *FAA* dihasilkan ketebalan total 38 cm terdiri dari *subbase course* 13 cm, *base course* 15 cm dan *surface course* 10 cm; Metode *FAARFIELD* dihasilkan ketebalan total 25 cm terdiri dari *subbase course* 10 cm, *surface course* 5 cm, dan kebutuhan tebal *overlay* 5 cm. Pembangunan Tahap III (Tahun 2036-2045) dengan pesawat rencana *CN235* dan *ATR72-500*, metode *Manual FAA* dihasilkan ketebalan total 38 cm terdiri dari *subbase course* 8 cm, *base course* 20 cm dan *surface course* 10 cm; Metode *FAARFIELD* dihasilkan ketebalan total 25 cm terdiri dari *subbase course* 10 cm, *surface course* 5 cm, dan tidak membutuhkan *overlay* perkerasan karena hasil analisis tebal perkerasan sama dengan tebal perkerasan pada pembangunan Tahap II.

Kata Kunci: *FAA*, Manual *FAA*, *FAARFIELD*, *Overlay*, *Runway*

ABSTRACT

GILANG SRI ANDRIYATMOKO, 2017, *The Design Of The Runway's Overlay In The Development of Korowai Batu Papua Airport Using The FAA's Manual and FAARFIELD Software* (*Supervised by* Dr. Eng. Iman Haryanto, ST.,MT.)

Korowai Batu is one of area in Papua Archipelago that still isolated and have a limited relationships due to the lack of transportation infrastructure. Development of air transportation needs to be improved to solve the isolation problem especially to reach isolated areas in the Papua. Korowai Batu has a runway with thickness is 17 cm. A pavement of runway needs a maintenance like overlay in surface layer to serve the aircraft that will be or have been using the runway. The design of thickness pavement of runway can be analyzed using FAA method. likes Manual of FAA and FAARFIELD Software.
The result of analysis, we concluded that the first development design (2016-2025) with DHC 6 Twin Otter and N219 design aircraft, FAA's Manual results 33 cm of total thickness with 13 cm of subbase course thickness, 10 cm base course thickness and 10 cm of surface course thickness; FAARFIELD results 20 cm of total thickness with 15 cm of subbase course thickness, 5 cm of surface course thickness and needs 3 cm of overlay thickness. The second development design (2026-2035) with CN235 and ATR42-500 design aircraft, FAA's Manual results 38 cm of total thickness with 13 cm of subbase course thickness, 15 cm base course thickness and 10 cm of surface course thickness; FAARFIELD results 25 cm of total thickness with 15 cm of subbase course thickness, 10 cm of surface course thickness and needs 5 cm of overlay thickness. The third development design (2036-2045) with CN235 and ATR72-500 design aircraft, FAA's Manual results 38 cm of total thickness with 8 cm of subbase course thickness, 20 cm base course thickness and 10 cm of surface course thickness; FAARFIELD results 25 cm of total thickness with 15 cm of subbase course thickness, 10 cm of surface course thickness and it doesn't need an overlay because the thickness result of design has same thickness with thickness on second development design.

Keyword: FAA, FAA's Manual, FAARFIELD, Overlay, Runway